



# DATA SHEET

## 1N4148WS, 1N4448WS, BAV16WS

### SURFACE MOUNT SWITCHING DIODES

**VOLTAGE** 100 Volts      **POWER** 200mWatts

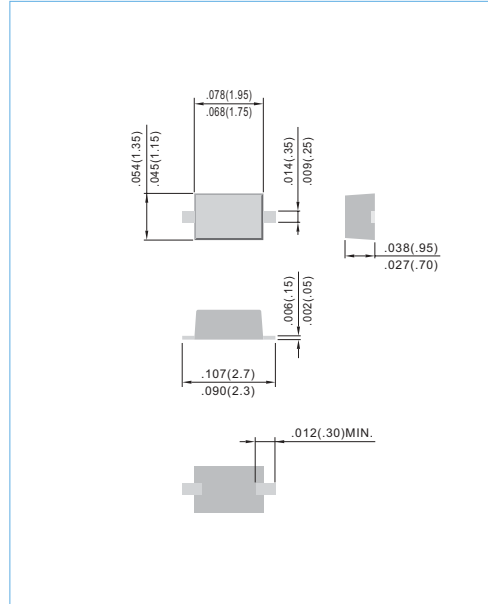
**SOD-323**      Unit: inch (mm)

#### FEATURES

- Fast switching speed.
- Surface mount package Ideally Suited for Automatic insertion
- Electrically Identical to Standard JEDEC
- High Conductance
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

#### MECHANICAL DATA

Case: SOD-323, Plastic  
Terminals: Solderable per MIL-STD-202, Method 208  
Approx. Weight: 0.008 gram



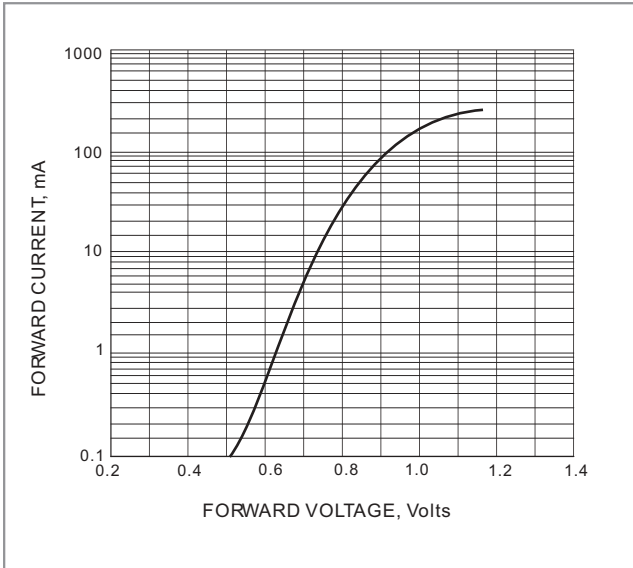
#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. For capacitive load, derate current by 20%.

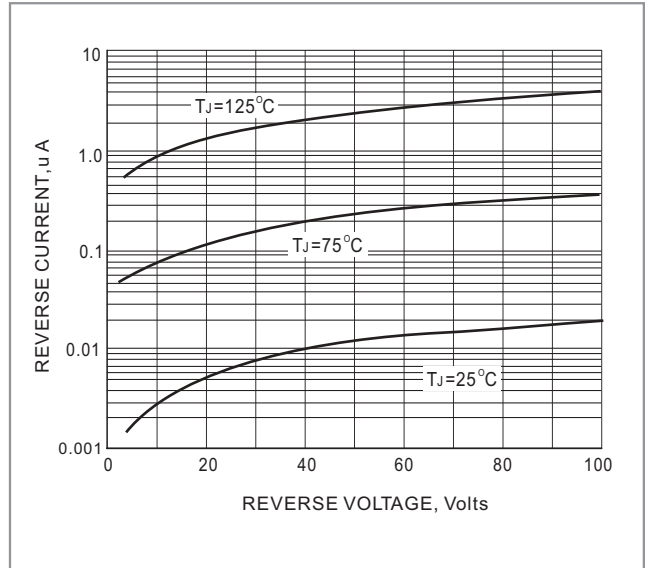
PARAMETER	SYMBOL	1N4148WS	1N4448WS	BAV16WS	UNITS
Marking Code		A 2	A 3	A 6	
Reverse Voltage	$V_R$		75		V
Peak Reverse Voltage	$V_{RM}$		100		V
RMS Voltage	$V_{RMS}$		50		V
Maximum DC Blocking Voltage	$V_{DC}$		75		V
Maximum Average Forward Current at $T_a=25^\circ C$	$I_{AV}$		200		mA
Peak Forward Surge Current, 1.0us	$I_{FSM}$	2	4	2	A
Power Dissipation Derate Above 25°C	$P_{TOT}$		200		mW
Maximum Forward Voltage	$V_F$	0.715 @ 0.001A 0.855 @ 0.01A 1.0 / 0.05A 1.25 @ 0.15A	0.72 @ 0.005A 1.0 @ 0.1A	0.855 @ 0.01A	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	0.025 @ 20V 2.5 @ 75V	2.5 @ 75V	1.0 @ 75V	uA
Junction Capacitance (Notes1)	$C_J$	1.5	4.0	2.0	pF
Maximum Reverse Recovery (Notes2)	$T_{RR}$	4	4	6	ns
Maximum Thermal Resistance	$R_{\theta JA}$		640		°C / W
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$		-55 TO +150		°C

**NOTE:**

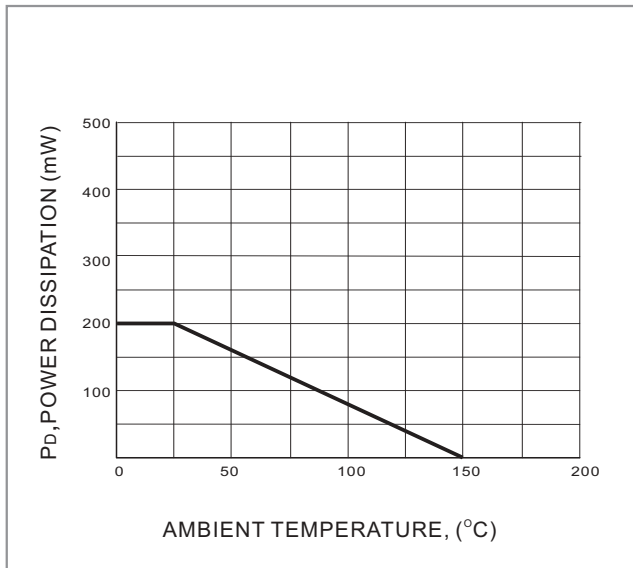
1.  $C_J$  at  $V_R=0$ ,  $f=1$ MHZ
2. From  $I_F=10$ mA to  $I_R=1$ mA,  $V_R=6$ Volts,  $R_L=100\Omega$



**FIG. 1-TYPICAL FORWARD CHARACTERISTIC**



**FIG. 2-TYPICAL REVERSE CHARACTERISTICS**



**FIG. 3 POWER DERATING CURVE**